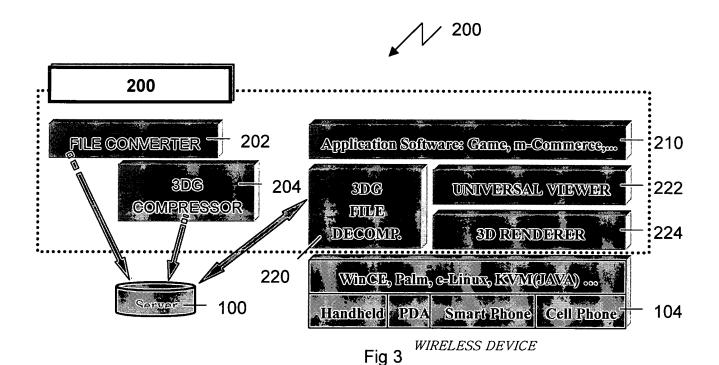
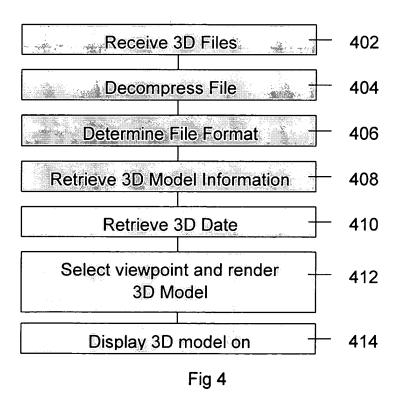
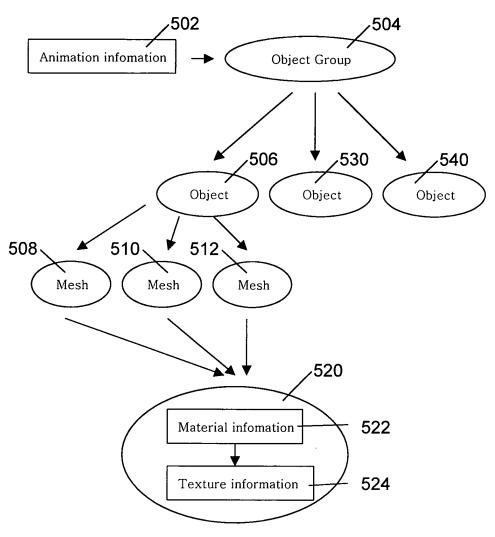


Fig 2





3d modeling data structure



Object Group: animation information

Object: x,y,z position

Mesh:

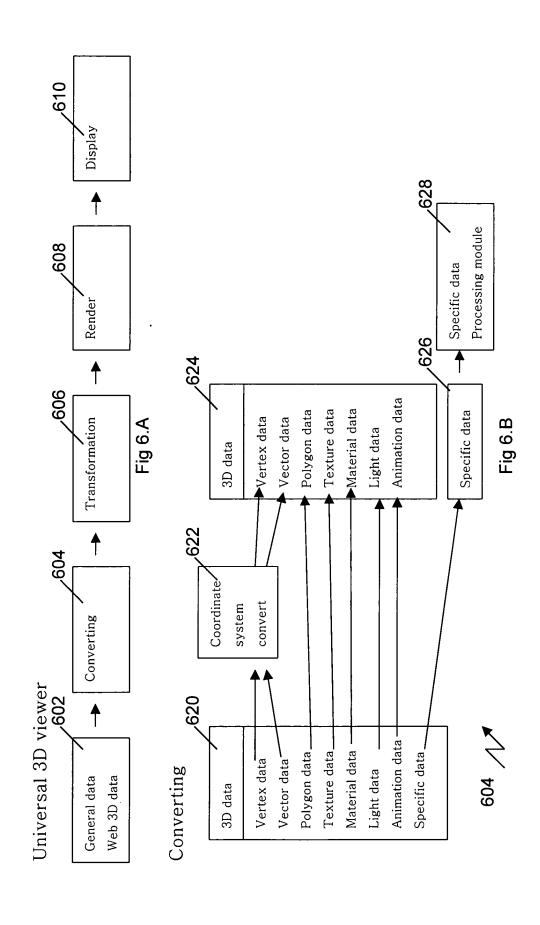
Vertex Info ∶ x,y,z position

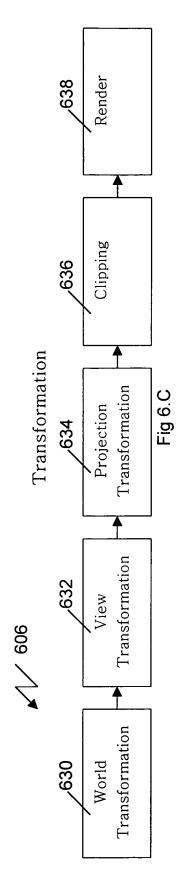
Polygon Info: Information on vertex that make up polygon Vector Info: Normal vector info needed to calculate lighting

Texture Info: texture coordinate info Material Info: material index info

Lighting Info:

Fig 5





World Transformation: local to world transformation

View Transformation: world to camera transformation

Projection Transformation: 3D world to 2D world

Clipping: Clip polygons to viewing

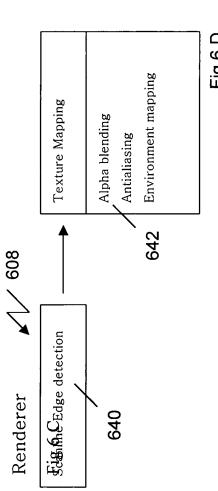


Fig 6.D

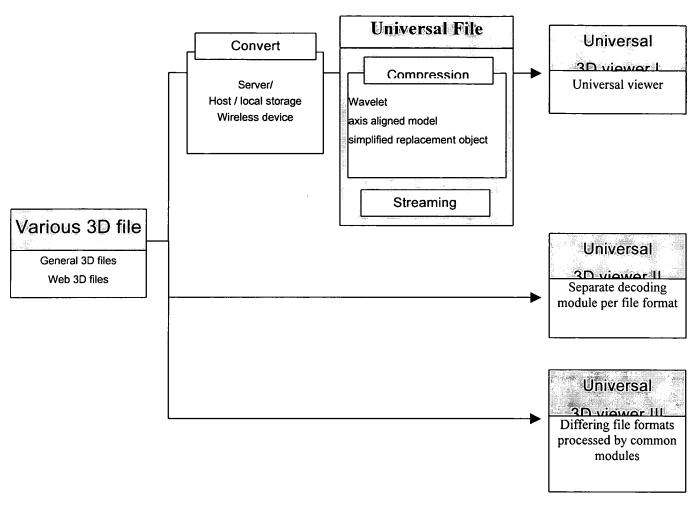


FIG. 7A

Server/Local Storage

Convert
Server
Host /local storage

Universal 3D

3dfw

3dfw

3dfw

FIG. 7C

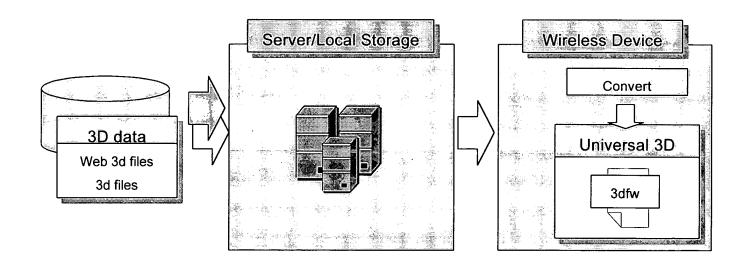


FIG. 7D

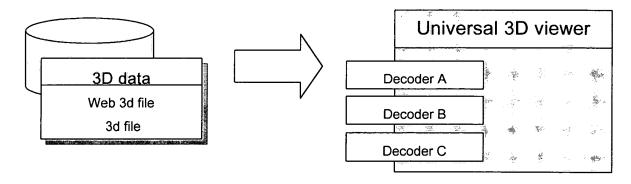
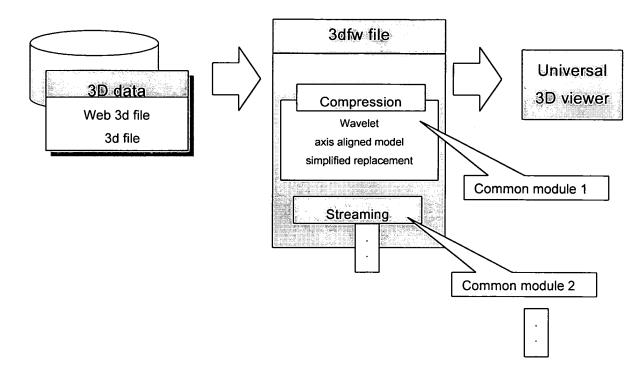
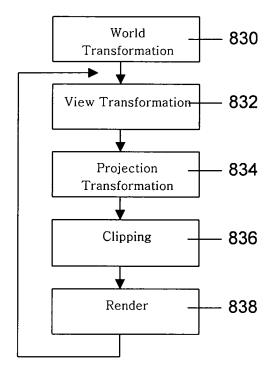


FIG. 7E





< rendering of stationary objects > .

Fig 8